

SOME NEW MOSQUITOES FROM CEYLON.

BY

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Communicated by E. Ernest Green, F. E. S.

(WITH PLATES A & B.)

A small collection of mosquitoes taken by Mr. E. E. Green in Ceylon included four new genera and eight new species which are described here. Besides these, a single ♀ of Dönitz's *Anopheles deceptor*; ♀'s of *Myzorhynchus barbirostris*, Van der Wulp; ♀'s of Giles *Siegomyia pseudotæniata*, also ♀ *Tæniorhynchus ager*, Giles; *Culex tigripes*, Grandpre; *Mansononia annulifera*, Theobald—all new to the Island.

The *Anopheles deceptor* shows, on examination of the scales, to belong to Meigen's genus *Anopheles* as recently restricted by me.

Some ♂ and ♀ *Myzomyia rossii*, Giles, were very pale varieties. No other species in the collection had any peculiarities.

Two of the new genera *Lophoceraomyia* and *Rachionotomyia* are of particular interest on account of their peculiar structure, the latter having a large scutellar spine, the former a strange modification of the verticillate hairs which appear to form definite organs; what purpose they serve is at present unknown.

Genus MEGARHINUS, Rob. Desvoidy.

Essai sur les tribu des Culicides, Mem. Soc. d'Hist. de Paris, III, p. 412
(1827).

MEGARHINUS MINIMUS, nov. sp. (fig. 1).

Thorax shiny black with metallic bronzy scales, some blue and green scales at the base of the wings; pleuræ silvery white; prothoracic lobes blue. Head bronzy brown with metallic green and blue border around the eyes. Palpi long, acuminate and thin, deep violet; proboscis deep violet. Abdomen metallic violet and purple with creamy lateral spots, the apical segment coppery red; basal lobes of genitalia deep brown. Legs brown with violet reflections, creamy at the base of the femora and below the femora.

♂ Head black with deep bronzy brown flat scales behind and over most of the surface with sometimes metallic reflections and with metallic green and blue scales around the eyes. Two black chaetæ project forwards between the eyes and one on each side of the median pair. Antennæ brown, the basal joint large and globular, black with

a grey sheen at the sides. Clypeus black ; proboscis metallic violet. Palpi long, thin, metallic violet, acuminate ; composed of four segments, the acuminate apical one slightly longer than the penultimate segment, the penultimate and the preceding one nearly equal (fig. 1 *b*) ; on the penultimate segment are a few short black spines.

Thorax shiny black clothed with metallic brassy flat scales of two sizes, mostly spindle-shaped, with a patch of pale blue ones at the base of the wings and a few rather short black spines ; just behind the root of the wings are some large flat apple-green scales. Prothoracic lobes clothed with flat mauve and pale blue scales ; scutellum black with small flat brassy, green and coppery scales on the large mid lobe, dusky over on the lateral lobes ; border-bristles brown ; metanotum dark-brown ; pleuræ yellowish-brown with dense flat snowy white scales. Abdomen expanding apically, metallic deep blue and violet basally and extending to the last few apical segments which are more brilliant, their bases with green and blue scales, their apical portions with violet and coppery red, the apical segment and to some extent the basal lobes of the genitalia with fiery red and coppery scales ; no caudal tuft (fig. 1 *c*), but the two last segments have short, dense, black lateral bristles ; on the first segment is a large creamy lateral patch, there are also more or less prominent basal creamy lateral patches to the other segments ; venter creamy yellow, except for the black apex.

Legs uniformly black with metallic violet scales ; fore ungues unequal, the larger uniserrated, of the hind legs also unequal, and apparently simple, three of the hind small, much curved, equal and simple.

Wings (fig. 1*a*) small, scales brown, those at the base showing violet reflections ; the first sub-marginal cell so minute that it is scarcely perceptible to the naked eye ; second posterior cell fairly large and broad about half the length of its stem ; the third long vein carried well past the cross-veins as a scaled vein ; supernumerary cross-vein about three times its own length nearer the apex of the wing than the mid, mid cross-vein small, joining the posterior cross-vein which is about five times the length of the mid. Halteres dull ochreous.

Length of body 6 mm ; of palpi 4 mm.

Habitat : Yatiyantota, Ceylon.

Time of capture : March, (1902).

Observations.—Described from a single perfect ♂. Whether it will come in *Megarhinus* or *Toxorhynchites* it is not possible to say, but I fancy it is a true *Megarhinus*. Its small size will at once separate it from all known members of the two genera. It is also peculiar in having spines or bristles in the place of a caudal fan and in the very minute first fork-cell. The abdomen shows all manner of metallic and color reflections.

Genus STEGOMYIA, Theobald.

Mono. Culicid I., p. 283 (1901.)

STEGOMYIA ANNULIROSTRIS, nov. sp.

Head creamy grey; proboscis black with a median white area. Thorax brown with creamy white scales scattered over it, most dense in front; pleuræ brown with white puncta. Abdomen deep brown, the third, fourth and fifth segments with basal median triangular white spots, apical segments yellow-scaled, lateral white median spots to all the segments. Legs with very narrow pale basal bands to some of the fore and mid tarsi, broader ones on the hind pair; knee spots snowy white, also base of hind femora.

♀ Head covered with flat silky creamy grey scales which have a rusty brown hue at the sides when seen in some lights. Proboscis black with a clear median white band. Palpi short, black-scaled, the apex apparently truncated. Antennæ brown, basal segment testaceous.

Thorax black clothed with rather long, thick silky white and creamy narrow curved scales, most densely in front and rather broader scales in front of the scutellum; golden-brown bristles project over the roots of the wings; scutellum covered with small flat white scales and with golden-brown border bristles; metanotum reddish-brown; pleuræ brown with patches of white scales. Abdomen deep blackish-brown, the third, fourth and fifth segments with a basal white median spot, somewhat triangular on the fourth and fifth segments, the apical segments with yellowish and creamy scales, except the extreme apex which is black, no markings dorsally on the first and second segment, each segment with lateral median white spots; border-bristles small pale golden.

Legs brown with some basal white bands: on the fore legs there is a narrow band at the base of the metatarsus and first two tarsi; the base of the femora paler than the remainder; in the mid legs traces of similar pale bands and a white prominent knee spot, on the venter

the whole foot is shiny creamy white ; in the hind legs the greater part of the femora are white, the apex only dark and the white basal bands on the metatarsi and first three tarsi broader than on the other feet ; fore and mid ungues equal, uniserrated, the hind equal and simple.

Wings with brown scales, fork-cells short, upper border darker than the rest of the wing ; first sub-marginal longer and slightly narrower than the second posterior cell, its stem nearly as long as the cell, stem of the second posterior cell as long as the cell ; posterior cross-vein some distance from the mid cross-vein. Lateral vein scales rather long. Halteres with pale stem and fuscous knot.

Length 4 mm.

Habitat : Peradeniya, Ceylon.

Time of capture : January, (1902).

Observations.—Described from a single ♀.

It differs from all known *Stegomyias* in having a banded proboscis and in thoracic ornamentation. The mid tarsi look all dull white in some lights ; this is due, I fancy, to the neutral surface of the segments being pale-scaled. The thorax is slightly rubbed, but is evidently entirely covered with the pale scales which now and again present the same rusty hue as that seen in the head scales.

STEGOMYIA MEDIOPUNCTATA, nov. sp.

Head with a snowy-white median area, black at the sides and with a few white lateral scales ; proboscis black, unbanded ; palpi black with white apex. Thorax deep brown, the front with a broad area of large white scattered narrow-curved scales, the remainder with pale dull brown scales ; scutellum white-scaled in middle, brown laterally ; abdomen black, segments with basal median white spots. Legs deep brown, the fore and mid metatarsi and first tarsals with small white apical bands, the hind with broad white basal bands to the metatarsi and first tarsal, second tarsal all black, third nearly all white except for a minute black apex, fourth black.

♀ Head clothed with large flat scales, those on the middle snowy-white, on each side black with a few white ones on the extreme sides, a few black bristles project forwards ; clypeus black ; proboscis black ; palpi black scaled with snowy-white apical scales ; antennæ deep brown, basal segment black with a crown of snowy-white scales. Thorax deep

brown covered with rather large irregular narrow-curved scales, those in the middle in front being white, those behind and at the sides pale dull brown; scutellum prominently trilobed, the median lobe with large flat white scales, the lateral lobes with large flat, dull brown scales and with brown border-bristles; pleuræ brown with patches of white scales.

Fore legs brown, a narrow pale band at the base of the metatarsus and first tarsal, the mid legs the same, only there is a distinct snowy-white knee spot; hind legs with the base and venter of femora white, the base of the metatarsi and first tarsal segment white, the second tarsal all black, the third all white but for a small black apex, last tarsal small all black.

Wings with typical brown Stegomyian scales; first sub-marginal cell longer and slightly narrower than the second posterior cell, its base slightly nearer the base of the wing, its stem about half the length of the cell; stem of the second posterior nearly as long as the cell; posterior cross-vein about twice its own length distant from the mid. Halteres with fuscous knob.

Length 3 mm.

Habitat: Peradeniya, Ceylon.

Time of capture: November (1901).

Observations.—Described from a single female in excellent condition. The curious leg banding will at once separate it from all known Stegomyias.

Genus TRICHORHYNCHUS, nov. gen.

Head clothed with small flat scales in front forming a broadish area, similar ones at the sides, narrow-curved ones over most of the median area and many narrow upright forked ones; antennæ with long segments, verticillate hairs scanty, the internodes densely hairy; palpi of ♀ rather prominent, apical segment long, slightly swollen. Thorax with narrow-curved scales, also the scutellum. Abdomen and legs normal. Wings with dense scales on the veins of the apical area, those on the first long vein and the branches of the second dense, intermediate in form between *Culex* and *Tæniorhynchus*, those on the upper branch of the fourth shorter and broader than the rest.

This genus is very marked and comes between the Stegomyian group and the true *Culex*. It can at once be told by the cephalic scale structure, and the densely hairy antennæ are also very characteristic.

TRICHORHYNCHUS FUSCUS, nov. sp. (fig. 2).

Head brown with a greyish border around the eyes and at the sides composed of small flat scales. Palpi, proboscis and antennæ deep brown ; thorax tawny to testaceous brown ; pleuræ pale ferruginous. Abdomen ferruginous to dusky brown, brighter brown beneath. Legs deep brown, paler basally ; unbanded. Wings rather short, fork-cells short.

♀ Head (figs. 2, *a.* & *e.*) with small flat grey scales forming a broad border around the eyes and with similar flat scales at the sides, in the middle small dull golden narrow curved scales and fine black upright forked scales behind. Palpi (fig. 2, *g.*) short, brown, testaceous beneath ; proboscis brown, the testaceous hue present as in the palpi ; clypeus (fig. 2, *h.*) pale yellowish brown ; antennæ (fig. 2, *d.*) brown, basal segment pale yellowish-brown, very pilose between the verticils. Thorax bright ferruginous clothed with narrow-curved mouse-colored and dull golden scales and with numerous bristles of a more or less dull hue ; scutellum (fig. 2, *c.*) bright testaceous with small narrow-curved scales as on the thorax ; seven border-bristles to the mid lobe, metanotum bright chestnut-brown ; pleuræ pale ferruginous with frosty sheen in some lights and a few pale bristles.

♂ Abdomen dusky brown, ferruginous brown in some lights covered with dusky brown scales and with rather short pale border-bristles ; venter brighter brown.

Legs deep brown, coxæ and venter of femora paler ; ungues equal and simple.

Wings rather short, the scales dense on the apical area, especially on the branches of the fork cells and on the first long vein, these scales broader than in *Culex*, approaching *Tæniorhynchus* form ; fork-cells rather small, the first sub-marginal longer and very slightly narrower than the second posterior, its stem more than half the length of the cell, its base a little nearer the apex of the wing ; stem of the second posterior as long as the cell ; scales on the upper branch of the fourth vein rather broader than elsewhere. Posterior cross-vein nearly twice its own length distant from the mid ; mid and supernumerary meet at an angle. Halteres pale, with faintly fuscous knob.

Length 5 mm.

Habitat : Peradeniya, Ceylon.

Time of capture : December (1901).

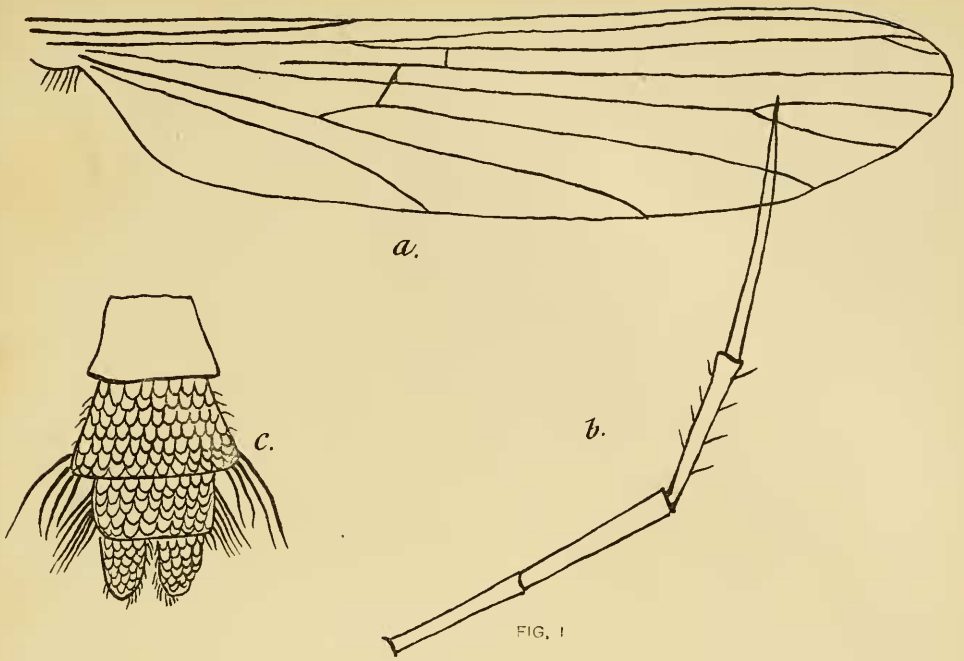


FIG. 1

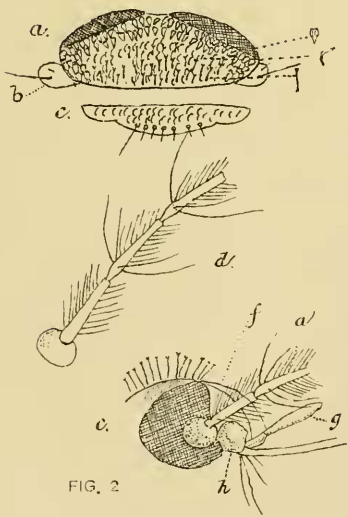


FIG. 2

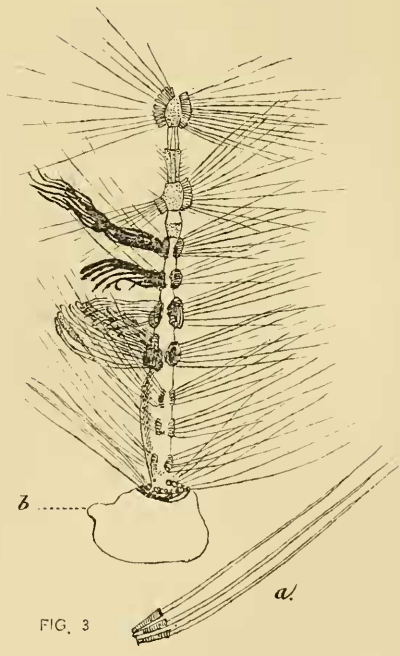


FIG. 3

Observations.—Described from a single ♀ in perfect condition. It is an obscure species, resembling a *Culex*, unless examined under the two-third power when its generic characters are at once seen both in regard to cephalic and wing scale structure.

Genus PSEUDOGRABHAMIA, nov. gen.

Head clothed with narrow-curved, upright forked and flat lateral scales. Mesothorax with narrow-curved scales; scutellum with small flat scales only on the lateral lobes, small flat ones on the mid lobe, except along the posterior border where there are narrow-curved scales; metanotum nude. Wings with rather broad cone-shaped scales especially on the basal half of the veins, thin lateral ones on the apical halves and rather broader ones on the stems of the fork-cells; fork-cells short. Male palpi with the two apical segments rather swollen, also the apex of the antipenultimate; the apical segment bluntly acuminate, both end segments with hair-tufts and also hairs on the apex of the antipenultimate segment.

This genus looks very much like *grabhamia*, but can at once be told by the scutellum having small flat scales, not all narrow curved ones as in that genus.

PSEUDOGRABHAMIA MACULATA, nov. sp.

Thorax reddish-brown with two rather indistinct small pale spots; pleuræ with silvery puncta. Abdomen with basal white bands. Legs with mottled scales and basal white bands. Wings short with small fork-cells, scales mottled. Antennæ of ♂ flaxen; palpi brown with three narrow pale bands; apical joint acuminate.

♀ Head brown with scattered greyish-white, rather broad narrow-curved scales, very small narrow-curved golden ones around the eyes and numerous black upright forked scales. Antennæ deep brown, the basal globular segment black to brown, the base of the second segment bright testaceous. Clypeus black; proboscis with deep brown, black and scattered white scales. Palpi short, with deep brown scales, except at the apex where they are white. Thorax deep brown with very small reddish golden-brown narrow curved scales nearly all directed posteriorly; ornamented with four round silvery grey spots on the mesonotum, similar colored ones just in front near the head and another spot on the front of the root of the wings and scattered grey scales in front of the scutellum; pleuræ brown with grey puncta; scutellum with small flat white scales only on the lateral lobes, small flat white ones

on most of the median lobe with a few narrow-curved pale golden ones on its apical edge, with bright brown border bristles. Abdomen deep, blackish-brown with basal white bands and with short pale golden border-bristles.

Legs deep brown, the femora and tibiæ and metatarsi with scattered pale scales, the knees white, metatarsi and first three tarsi of the fore and mid legs with basal pale yellow to almost white bands, last tarsal segment all deep brown; in the hind legs all the segments have basal white bands; ungues of the fore and mid legs equal and uniserrated, of the hind equal and simple. Wings short with the fork-cells short, the scales mottled brown and creamy grey; scales on the basal areas of the veins and the median paired ones cone-shaped and broad, the lateral ones on the apical halves linear and very narrow, except on the branches of the first fork-cell where they are broader; on the stems of the fork-cells they are much broader and cone-shaped; some of the scales are asymmetrical; first sub-marginal cell longer and slightly narrower than the second posterior cell, its base slightly nearer the apex of the wing, its stem about the same length as the cell; stem of the second posterior slightly longer than the cell; posterior cross-vein not quite its own length distant from the mid cross-vein.

Length 3·8 to 4 mm.

♂ Antennæ banded brown and grey, plume hairs bright flaxen. Proboscis not mottled as in the ♀. Palpi long; the two apical segments and the apex of the penultimate slightly swollen; the apical segment about the same length but narrower than the penultimate, the remainder of the palps looking like one long segment, the jointing being invisible owing to the scales; color deep brown; creamy white scales form an apparent band at the base of the two apical segments and there is another very narrow pale band half way down the remainder of the palps; the two apical segments have blackish plume-hairs and also both sides of the apex of the anti-penultimate segment. Legs as in the ♀; fore and mid ungues unequal, both uniserrated; the hind ones simple (? equal). Wings much as in ♀.

Length 4·3 mm.

Habitat: Galgamuwa, Ceylon.

Time of capture: August (1902).

Observations.—Described from two perfect ♀'s and one ♂. The species is very marked, but unless examined microscopically might

asily be placed in *Grabhamia*, from which it is separated by the small flat scutellar scales.

Genus LOPHOCERAOMYIA, nov. gen.

Head clothed with narrow-curved scales and numerous upright forked ones. Palpi short in the ♀; in the ♂ longer than the proboscis or only half its length. Proboscis swollen apically. Antennæ normal in the ♀, verticillate and pilose; in the ♂ plumose, some of the verticillate whorls modified into variously formed organs, apparently formed out of modified verticillate hairs. Thorax clothed with narrow curved scales, also the scutellum. Abdomen and legs normal. Scales on the veins on the apical area of the wings dense, the lateral vein scales broader than in *Culex*, those on the first long vein short and rather broad, upper costal border spiny, no lateral vein scales on the basal areas.

This genus can be easily told on the ♂ by the curious antennal organs and in both sexes by the wing scales from *Culex* which it approaches in general appearance. I am also describing two new species in this genus from New Guinea and India in the catalogue of Culicidæ in the National Museum, Budapest.

LOPHOCERAOMYIA UNIFORMIS, nov. sp. (figs. 3, 4).

Head brown with a grey border around the eyes; proboscis deep broad slightly swollen apically; palpi deep brown. Thorax tawny brown, pale at the sides; pleuræ grey, green or pale brown. Abdomen deep chocolate brown, unbanded; venter dull ochreous. Legs long deep brown, except for pale coxæ and venter of femora. Wings transparent; fork-cells small; male palpi brown, acuminate, longer than the proboscis.

♀ Head brown, clothed with narrow-curved grey scales and numerous upright black forked ones behind, becoming fewer and browner near the front, thus covering most of the grey-scaled head and giving it a brown appearance except around the eyes where the grey scales only exist; clypeus testaceous; proboscis black, swollen apically, about two-thirds the length of the whole body, labellæ testaceous; palpi thin and rather long, about one-fifth the length of the proboscis, black scaled; antennæ brown with narrow pale bands and black verticillate hairs.

Thorax shiny brown, clothed with narrow-curved tawny brown scales, which become much smaller and almost black just before the scutellum, bristles long and black, scales at the sides somewhat paler in certain lights; scutellum pale brown with small narrow-curved dark scales;

metanotum pale brown; pleuræ pale grey, dull white or pale green, almost nude. Prothoracic lobes small, nude, pale brown.

Abdomen deep rich chocolate brown to dull brown; no banding or lateral spots; border-bristles pale; venter dull ochreous.

Legs deep brown, rather long, the coxæ and bases of femora grey; ungues all equal and simple. Wings with the branches of the first sub-marginal cell and the stem with rather long scales, those on the first long vein typical, also the spiny upper costal border; other lateral vein-scales may appear linear, but when flattened are much broader than in a true *Culex*; fork-cells short, the first sub-marginal considerably longer and narrower than the second posterior; its base nearer the base of the wing, its stem about half the length of the cell; stem of the second posterior as long or longer than the cell; mid cross-vein longer than the supernumerary, both united, posterior cross-vein longer than the mid nearly three times its own length distant from it; fringe dark and dense.

Halteres with pale stem and fuscous knob.

Length 3.5 to 4 mm.

♂ Palpi (fig. 4) long thin, longer than the proboscis by the last and nearly half the penultimate segments, with a few spines or hairs only on the two apical segments, the two segments nearly equal, black, remainder of palpi dull yellowish-brown. Fore ungues unequal, uniserated; hind equal and simple; mid?

Antennal organs as figured (fig. 3 a, b.). Wings with short fork-cells, the first sub-marginal considerably longer and narrower than the second posterior; its base a little nearer the base of the wing, its stem about two-thirds the length of the cell; stem of the second posterior slightly longer than the cell; posterior cross-vein longer than the mid, sloping backwards and about two-and-a-half times its own length distant from it; with the exception of the apical portions of the veins there are no lateral vein scales, only a narrow single row of median ones. Halteres pale with fuscous knob.

Length 4 mm.

Habitat: Peradeniya, Ceylon.

Time of capture: May (1902.)

Observations.—Described from two ♂'s and several ♀'s. It generally resembles *L. fraudator*, Theobald and *L. fragilis*, Theobald, but the ♂ can at once be told by the different palpi and antennal organs.

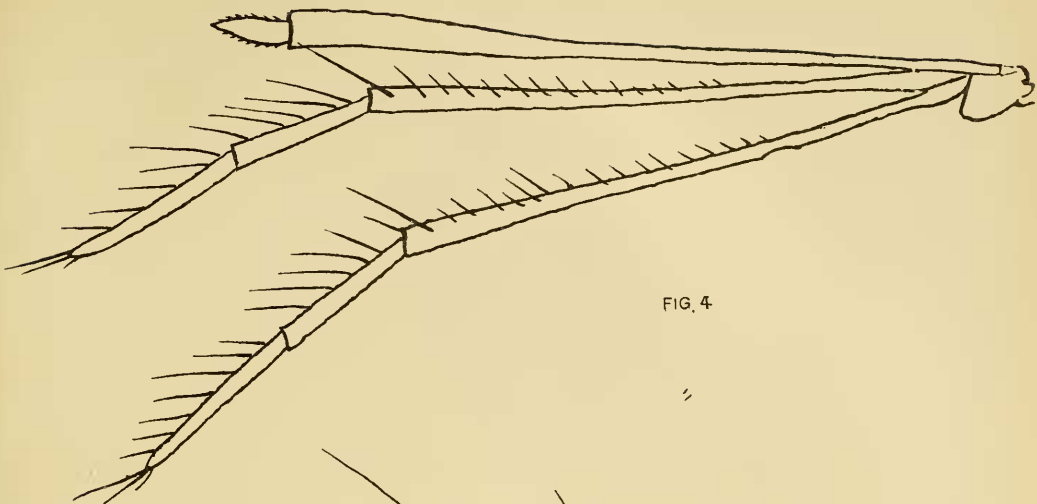


FIG. 4

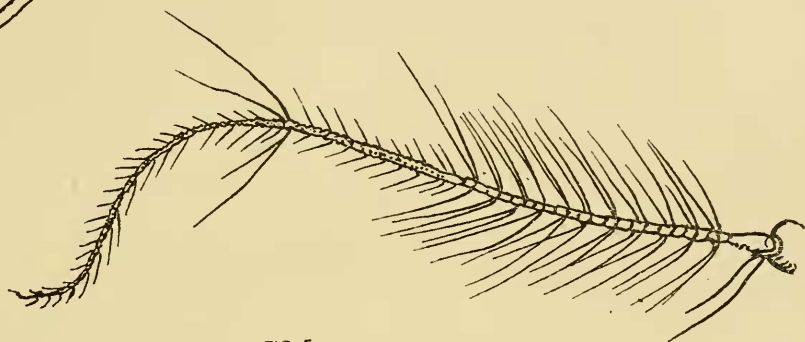


FIG. 5

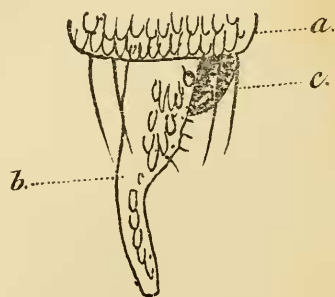
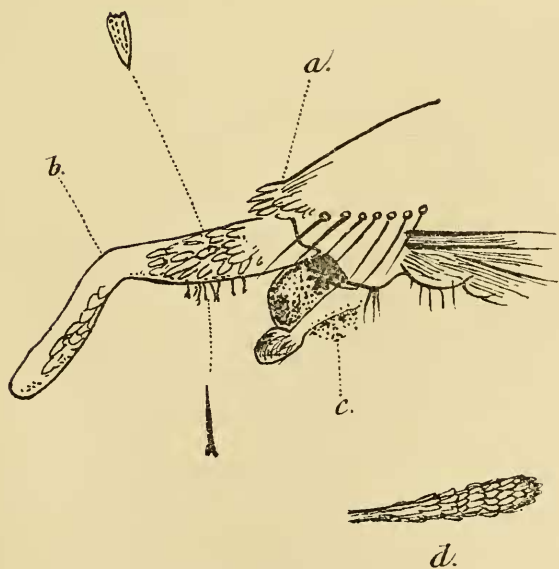


FIG. 6

